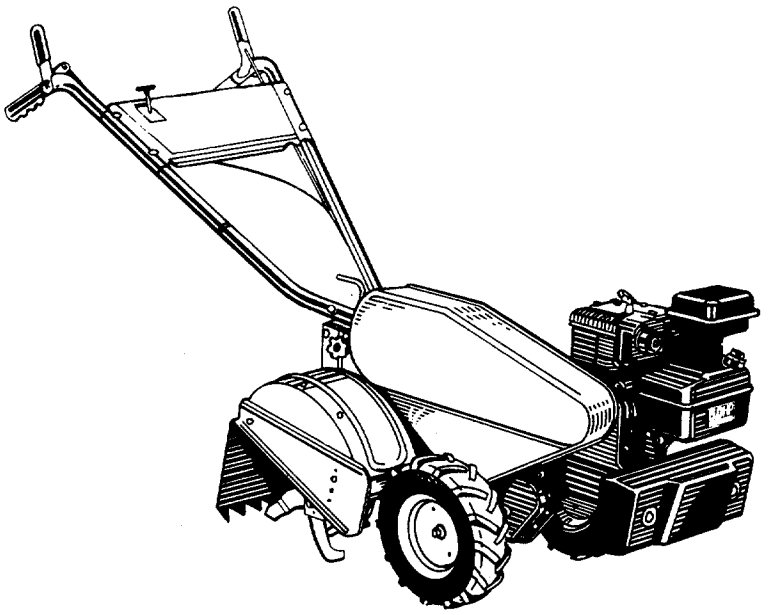
$1.00

OWNER'S GUIDE

ASSEMBLY • OPERATION • MAINTENANCE • PARTS



REAR TINE TILLER

Model Number 219-405-000

Important: Read Safety Rules and Instructions Carefully

PRINTED IN U.S.A.

FORM NO. 770-5250D

INDEX

Dear Customer,

So often throughout the year we are all in a rush to meet our daily obligations.

However, we at MTD Products Inc are taking a quick moment out to say. . .

"Thank you for your business."

Sincerely,
MTD PRODUCTS INC

INSTRUCTIONS GIVEN WITH THIS SYMBOL ARE FOR PERSONAL SAFETY. BE SURE TO FOLLOW THEM.

LIMITED WARRANTY

For one year from the date of original retail purchase, MTD PRODUCTS INC will either repair or replace, at its option, free of charge, F.O.B. factory or authorized service firm, any part or parts found to be defective in material or workmanship. Transportation charges for the movement of any power equipment unit or attachment are the responsibility of the purchaser. Transportation charges for any parts submitted for replacement under this warranty must be paid by the purchaser unless such return is requested by MTD PRODUCTS INC.

This warranty will not apply to any part which has become inoperative due to misuse, excessive use, accident, neglect, improper maintenance, alterations, or unless the unit has been operated and maintained in accordance with the instructions furnished. This warranty does not apply to the engine, Peerless components, motor, battery (except as noted below) or component parts thereof. Please refer to the applicable manufacturer's warranty on these items.

A battery which proves defective within ninety (90) days will be replaced without charge. After 90 days but within one year from the date of purchase, MTD will replace the defective battery for a charge of 1/12 of the current retail price of the battery for each full 30 day period between the date of purchase and the date of return.

This warranty will not apply where the unit has been used commercially.

Warranty service is available through your local authorized service dealer or distributor. If you do not know the dealer or distributor in your area, please write to the Customer Service Department of MTD.

The return of a complete unit will not be accepted by the factory unless prior written permission has been extended by MTD.

This warranty gives you specific legal rights. You may also have other rights which vary from state to state.

WARNING: This unit is equipped with an internal combustion engine and should not be used on or near any unimproved forest-covered, brush-covered or grass-covered land unless the engine's exhaust system is equipped with a spark arrester meeting applicable local or state laws (if any). If a spark arrester is used, it should be maintained in effective working order by the operator.

In the State of California the above is required by law (Section 4442 of the California Public Resources Code). Other states may have similar laws. Federal laws apply on federal lands. A spark arrester for the muffler is available through your nearest engine authorized service dealer.

To reduce the potential for any injury, comply with the following safety instructions. Failure to comply with the instructions may result in personal injury.

SAFE OPERATION PRACTICES FOR TILLERS

1. It is suggested that this manual be read in its entirety before attempting to assemble or operate this unit. Keep this manual in a safe place for future and regular reference and for ordering replacement parts.

2. Your tiller is a precision piece of power equipment, not a plaything. Therefore, exercise extreme caution at all times.

3. Read this owner's guide carefully. Be thoroughly familiar with the controls and the proper use of the equipment.

4. Never allow children to operate a power tiller. Only persons well acquainted with these rules of safe operation should be allowed to use your tiller.

5. No one should operate this unit while intoxicated or while taking medication that impairs the senses or reactions.

6. Keep the area of operation clear of all persons, particularly small children and pets.

7. Do not operate equipment when barefoot or wearing open sandals. Always wear substantial footwear.

8. Do not wear loose fitting clothing that could get caught on the tiller.

9. Do not start the engine unless the shift lever is in the neutral (N) position.

10. Do not stand in front of the tiller while starting the engine.

11. Do not place feet and hands on or near the tines when starting the engine or while the engine is running.

12. Never attempt to make a wheel or depth bar adjustment while the engine is running.

13. Do not leave the tiller unattended with the engine running.

14. Do not walk in front of the tiller while the engine is running.

15. Check the fuel before starting the engine. Gasoline is an extremely flammable fuel. Do not fill gasoline tank indoors, while the engine is running, or while the engine is still hot. Replace gasoline cap securely, and wipe off any spilled gasoline before starting the engine as it may cause a fire or explosion.

16. Do not run the engine while indoors. Exhaust gases are deadly poisonous.

17. Be careful not to touch the muffler after the engine has been running. It is hot.

18. Do not change the engine governor settings or overspeed the engine. Excessive engine speeds are dangerous.

19. Before any maintenance work is performed or adjustments are made, remove the spark plug wire and ground it on the engine block for added safety.

20. Use caution when tilling near buildings and fences. Rotating tines can cause damage or injury.

21. Before attempting to remove rocks, bricks and other objects from tines, stop the engine and be sure the tines have stopped completely. Disconnect the spark plug wire and ground to prevent accidental starting.

22. Check the tine and engine mounting bolts at frequent intervals for proper tightness.

23. Keep all nuts, bolts and screws tight to be sure the equipment is in safe working condition.

24. Never store the equipment with gasoline in the tank inside of a building where fumes may reach an open flame or spark. Allow the engine to cool before storing in any enclosure.

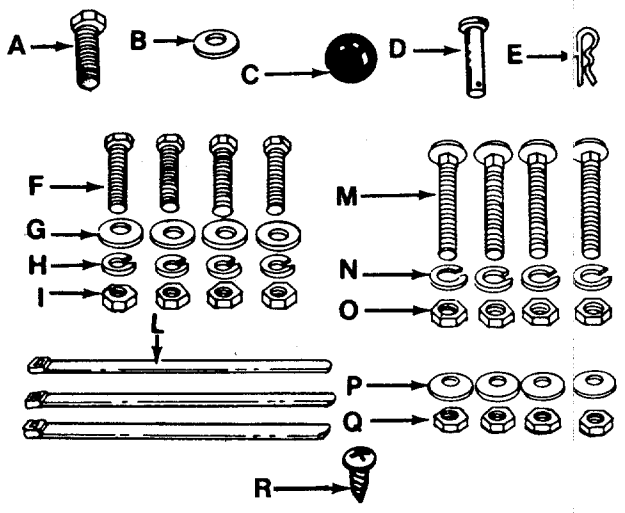


FIGURE 1.

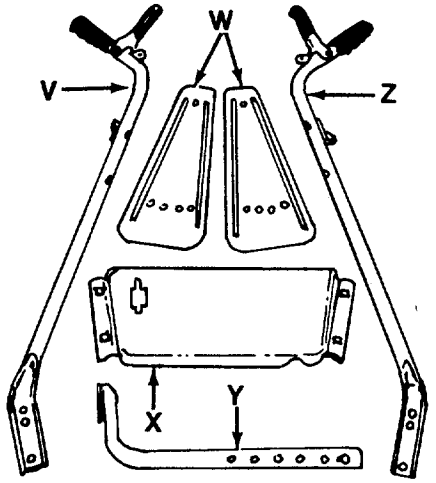


FIGURE 2.

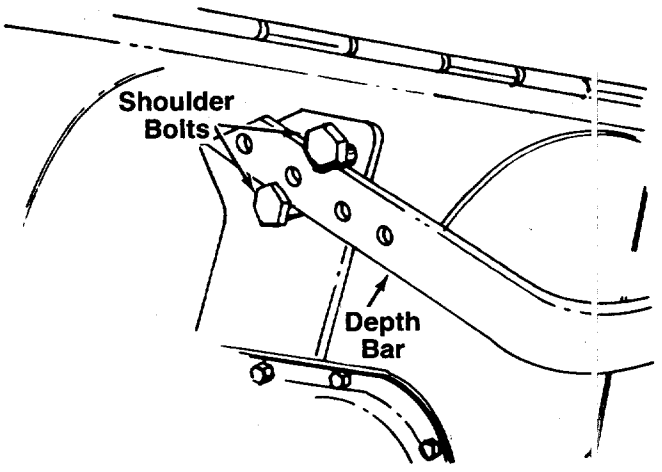


FIGURE 3.

ASSEMBLY

NOTE

This unit is shipped WITHOUT GASOLINE or OIL. After assembly, see separate engine manual for proper fuel and engine oil recommendations.

←Contents of Hardware Pack: (See Figure 1)

A (1) Hex Bolt 3/8-16 x 3/4″ Long
B (1) Flat Washer 3/8″ I.D.
C (1) Ball Knob
D (1) Clevis Pin
E (1) Hairpin Clip
F (4) Hex Bolts 3/8-16 x 1.0″ Long
G (4) Belleville Washers 3/8″ I.D.
H (4) Lock Washers 3/8″ I.D.
I (4) Hex Nuts 3/8-16 Thread
L (3) Cable Ties
M (4) Carriage Bolts 5/16-18 x 1.75″ Long
N (4) Lock Washers 5/16″ I.D.
O (4) Hex Nuts 5/16-18 Thread
P (4) Belleville Washers 5/16″ I.D.
Q (4) Hex Nuts 5/16-18 Thread
R (1) Self-Tapping Screw

←Loose Parts in Carton: (See Figure 2)

V (1) Handle—R.H.
W (2) Side Shields
X (1) Handle Panel
Y (1) Depth Bar Assembly
Z (1) Handle—L.H.

1. Remove tiller, loose parts and hardware pack from carton. Make certain all parts and literature have been removed from the carton before the carton is discarded.
2. Extend the control cables attached to the tiller and place on the floor. Be careful not to bend or kink the cables.

DEPTH BAR INSTALLATION

1. Raise the tine shield hinge flap assembly. Insert the depth bar assembly (Y) between the two shoulder bolts and up through the tine shield ←assembly as shown in figure 3.

NOTE

For clarity, figure 3 was taken with tiller raised on end. It is not necessary to raise the tiller.

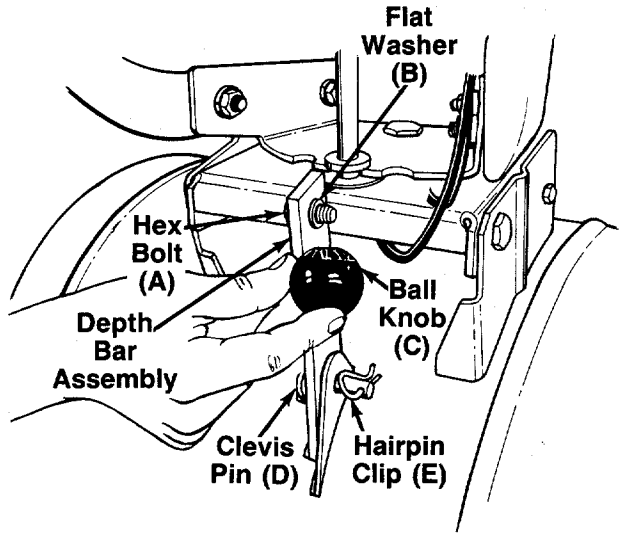


FIGURE 4.

2. Insert clevis pin (D) through the tine shield and depth bar assemblies. Secure with hairpin clip (E). See figure 4.
3. Insert hex bolt (A) into the upper hole of the depth bar assembly. Place flat washer (B) onto the hex bolt and thread ball knob (C) onto the hex bolt. See figure 4. Tighten securely.

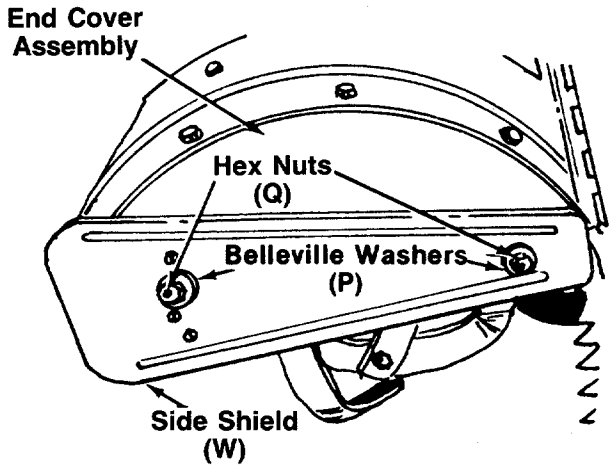


FIGURE 5.

SIDE SHIELD INSTALLATION

Mount side shields (W) over the weld bolts on the end cover assemblies. Secure with belleville washers (P) and hex nuts (Q). See figure 5.

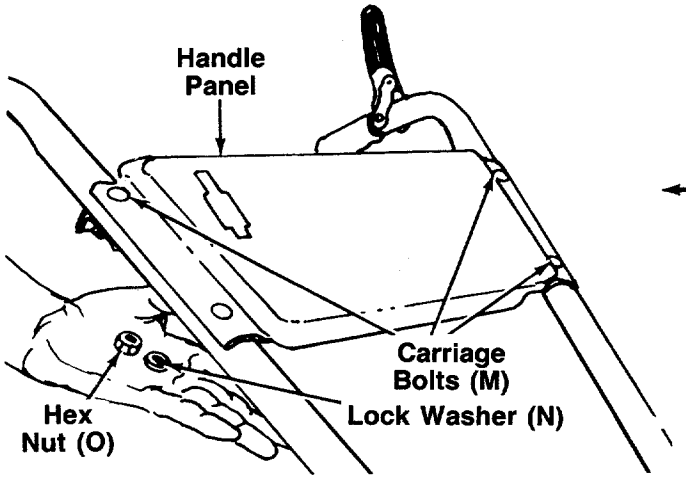


FIGURE 6.

HANDLE ASSEMBLY

1. Attach the handle panel to the handles using carriage bolts (M), lock washer (N) and hex nuts (O). See figure 6. Do not tighten.

NOTE

To align the holes in the handle panel and the handle, it may be necessary to loosen the cable brackets which are mounted to the back of the handles with self-tapping screws.

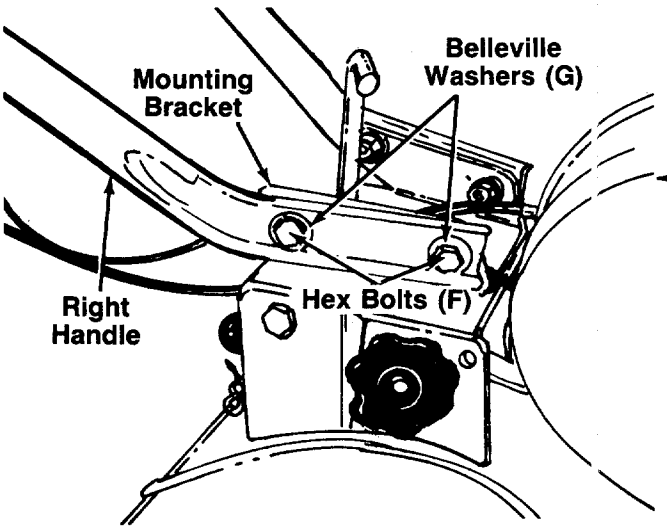


FIGURE 7.

2. Place handle assembly in position on the tiller. Working on one side of the unit, insert one hex bolt (F) through belleville washer (G) (crowned side of washer goes against head of bolt), then through bottom hole of handle and handle mounting bracket. Secure loosely with lock washer (H) and hex nut (I). See figure 7.
3. Align the other side of the handle with the handle mounting bracket. It may be necessary to use force to spring the handle over the handle mounting bracket. Secure loosely with hex bolt, belleville washer, lock washer and hex nut.
4. Secure upper hole in handle to handle mounting bracket (both sides) in the same manner.
5. Tighten securely all four nuts and bolts which secure the handles to the handle mounting brackets. Then tighten the four nuts at the handle panel.

THROTTLE CONTROL INSTALLATION

Assemble the throttle control to the handle panel as follows.

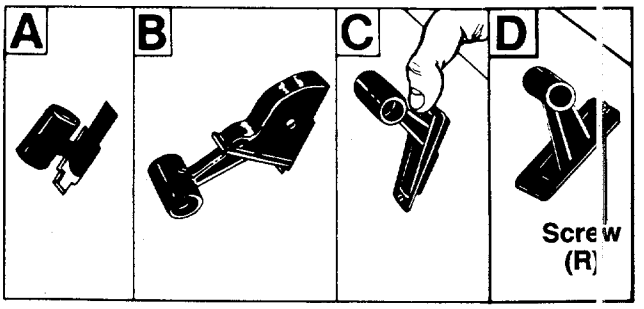


FIGURE 8.

1. Hold the throttle control assembly beneath the handle panel. Turn the control sideways and insert the lever up through the wide portion of the slot on the handle panel. See figure 8A.
2. After the end of the lever is through the slot, turn and then tip the control forward as shown in figure 8B to slide it through the slot.

NOTE

The lever must be all the way to the back of the control housing as shown in figure 8B.

3. Push the control back into the slot in the handle panel and press in place. Be certain the control is locked securely into the slot.
4. Secure the throttle control to the handle panel using the self-tapping screw (R). See figure 8D.

ATTACHING THE CLUTCH CONTROL CABLES

The drive clutch and tine clutch control cables are already attached to the unit. There is a tag attached to the drive clutch cable (cable which appears to be shorter). This cable attaches to the right handle.

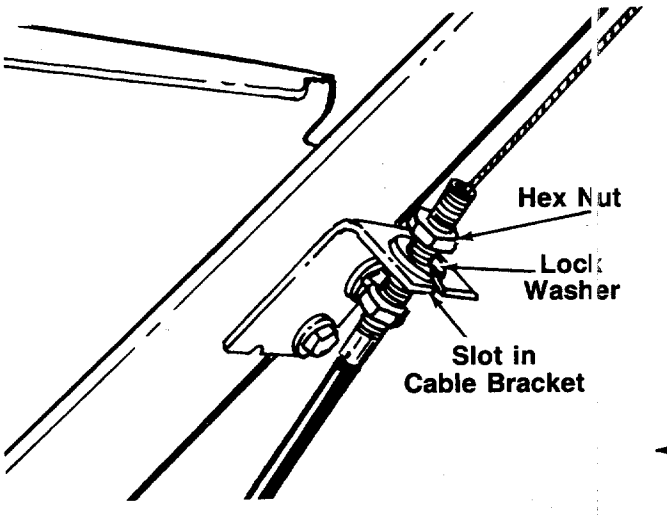


FIGURE 9.

NOTE

Both the drive clutch cable and the tine clutch cable are attached to springs, which are hooked to weld bolts as shown in figure 9. If either the cable or spring has come loose in shipping, it must be reassembled. Refer to page 18, reference numbers 1, 2, 89 and 98.

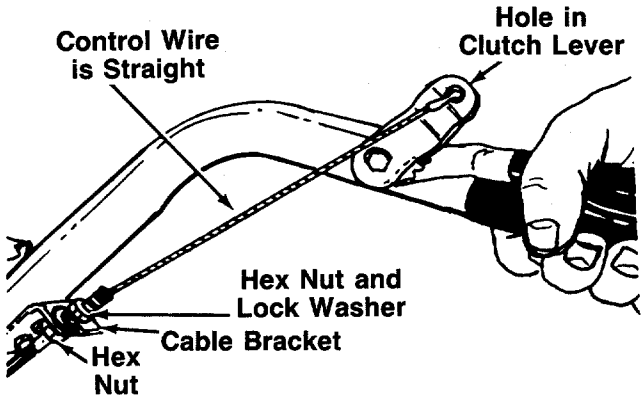


FIGURE 10.

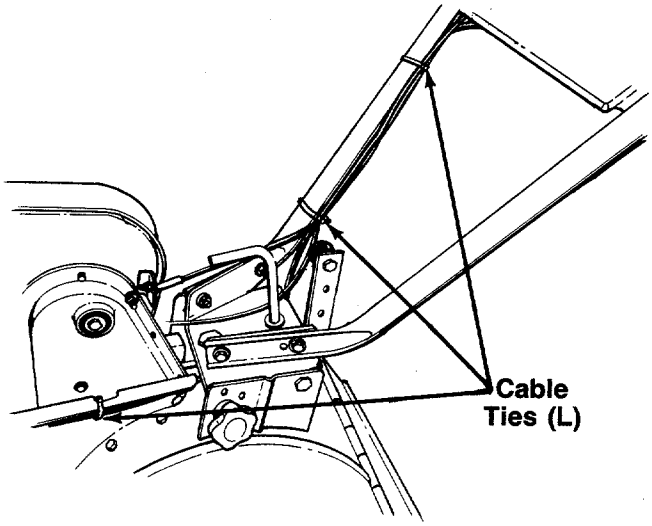


FIGURE 11.

1. Remove one nut and the lock washer from the end of the drive clutch cable (short cable). Slip the cable up through the slot on the cable bracket on the right handle. Rethread hex nut and lock washer on the end of the cable. See figure 9. Do not tighten at this time.
2. Hook the "Z" end of drive clutch cable into the hole in drive clutch lever.
3. With the clutch lever released (in the "up" position), adjust the bottom nut at the cable bracket so there is only a slight amount of slack in the control wire. Tighten the upper nut against the bracket. Squeeze the clutch lever against the handle. The control wire should now be straight. See figure 10.

NOTE

Do not overtighten control wire. Too much tension may cause it to break.

4. Attach the tine clutch cable (cable which appears to be longer) to the tine clutch lever on the left handle in the same manner as the drive clutch cable.
5. Secure all the cables to the right handle as shown in figure 11 with cable ties (L). In addition, secure the throttle cable directly to the tiller frame with cable tie.

TIRE PRESSURE

The tires on your unit may be over-inflated for shipping purposes. Reduce the tire pressure before operating the unit. Recommended operating tire pressure is approximately 12 p.s.i. (check sidewall of tire for tire manufacturer's recommended pressure).

WARNING

Maximum tire pressure under any circumstances is 30 p.s.i. Equal tire pressure should be maintained on both tires.

CONTROLS—Location and Use

Throttle Control

The throttle control lever is located on the right hand side of handle panel and controls the engine speed. See figure 12.

1. Start—Push throttle control lever forward (down) to start position.
2. Stop—Pull lever back (upward) to stop the engine.

Tine Clutch Lever

The tine clutch lever is located on the left handle. See figure 12. Squeeze the lever down to engage the tines. Release the lever to disengage the tines.

Drive Clutch Lever

The drive clutch lever is located on the right handle. See figure 12. Squeeze the lever down to engage the wheel drive. Release the lever to stop the wheels from driving.

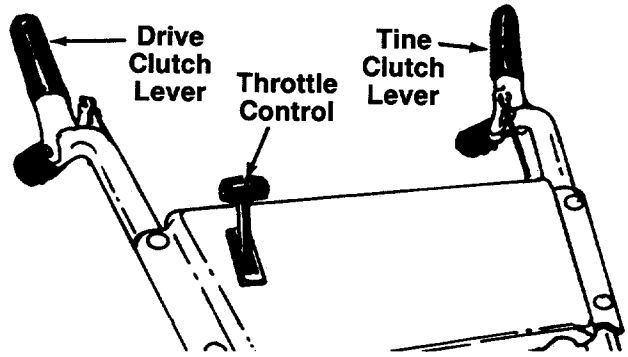


FIGURE 12.

OPERATION

NOTE

Engine is shipped **without** oil.

BEFORE STARTING

1. Before operating tiller for the first time or if tines have been removed and reassembled for any reason, check to be certain the tines are assembled correctly. **The sharp edge of the tines must enter the soil first as shown in figure 13.** (Figure 13 illustrates the left hand tines, viewed from the left hand side of the tiller. Right hand tines rotate in the same direction as the left hand tines.)

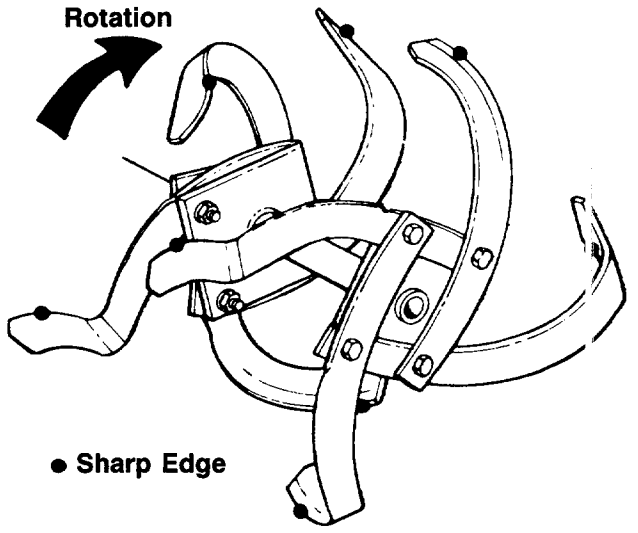


FIGURE 13.

2. Fill crankcase with oil as instructed in the separate engine manual packed with your unit.
3. Fill fuel tank with clean, fresh, lead-free, low-lead or regular grade leaded gasoline.

TO START ENGINE

WARNING

BE SURE NO ONE IS STANDING IN FRONT OF THE TILLER WHILE THE ENGINE IS RUNNING OR BEING STARTED.

1. Place the throttle control lever in START position.
2. Move choke lever to CHOKE position.

NOTE

A warm engine may not require choking.

3. Stand at side of tiller. Grasp the starter handle and pull out rapidly. Return it slowly to the engine. Repeat as necessary.
4. After engine starts, move choke lever gradually to OFF position.

Refer to engine manual for additional engine information.

TO STOP ENGINE

1. Move throttle control to OFF position.
2. Disconnect spark plug wire and ground to prevent accidentally starting while equipment is unattended.

HOW TO USE YOUR TILLER

WARNING

When operating the tiller for the first time, use the depth bar setting that gives 1½ inches of tilling depth (second hole from the top). Refer to figure 14. Use slow speed only.

Tilling depth is controlled by the depth bar which can be adjusted to five different settings. See figure 14. Adjust the side shields as shown in figure 15, as you adjust the depth bar. Be certain spark plug wire is disconnected and grounded against the engine.

1. When using the tiller for the first time, use the second adjustment hole from the top (1½" of tilling depth). See figure 14.

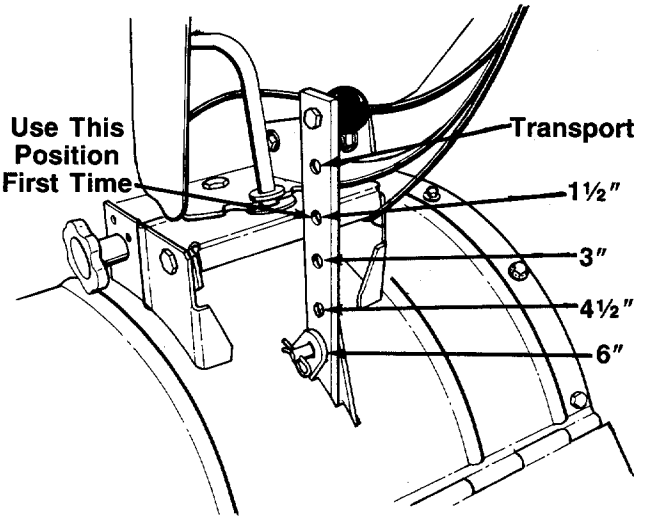


FIGURE 14.

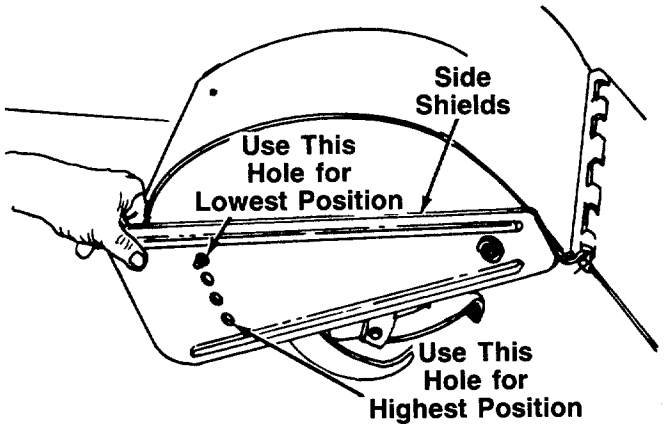


FIGURE 15.

2. When breaking up sod and for shallow cultivation, use the setting which gives 1½" of tilling depth (second hole from the top). Place the side shields in their lowest position. For further depth, raise the depth bar and side shields and make one or two more passes over the area.
3. When tilling loose soil, depth bar may be raised to its highest position (use bottom adjustment hole) to give the deepest tilling depth. Raise the side shields to their highest position.
4. To transport tiller, lower the depth bar (use top adjustment hole).

To adjust the depth bar, remove the clevis pin and hairpin cotter. See figure 14. Move the depth bar to the desired setting.

To adjust the side shields, remove the hex nut and belleville washer from the front and loosen the rear nut. See figure 15. Pivot the side shield to the desired position. Replace hex nut and belleville washer. Tighten securely.

To operate the tiller:

1. Select the depth bar setting.
2. Start engine as instructed on page 8.
3. Engage drive and tine clutch levers.

WARNING

Engage wheel drive before engaging the tine clutch lever.

NOTE

To transport tiller, **do not** engage the tine clutch lever. Engage the wheels only.

WARNING

Do not push down on the handles so that the wheels are lifted off the ground while the tine clutch is engaged, or the tiller could move backward and cause personal injury.

For best results, it is recommended the garden be tilled twice (lengthwise, then widthwise) to pulverize the soil.

ADJUSTMENTS

HANDLE ADJUSTMENT

The handle may be placed in one of nine different positions. The handle may be adjusted to one of three height positions, and also may be adjusted to be in line with the tiller, or swung to the left or right so the operator is not walking in the freshly tilled soil.

To adjust the handle height, remove the hand knob and locking pin shown in figure 16. Select one of the three adjustment holes and reassemble.

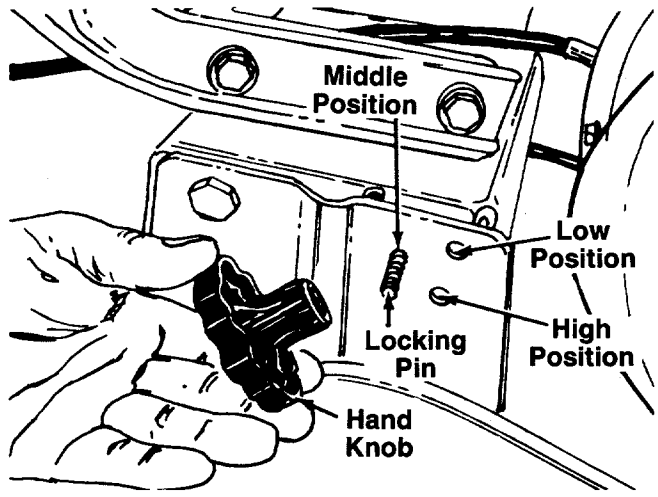


FIGURE 16.

To adjust the handle position from side to side, loosen the adjustment handle by turning it counterclockwise several turns. Pull the adjustment handle backward and pivot the tiller handle to desired position. Release and tighten the adjustment handle. See figure 17.

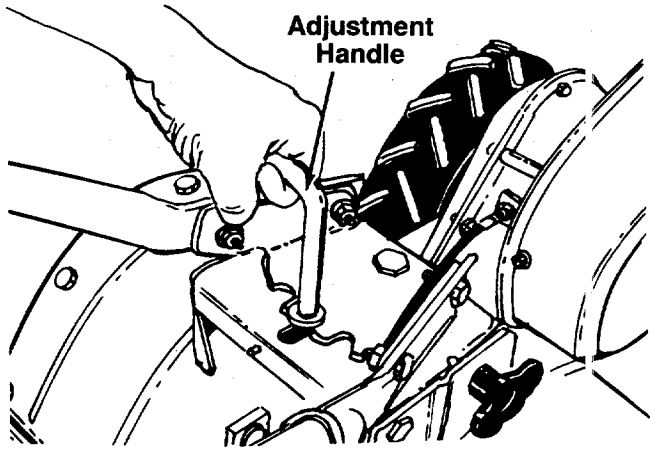


FIGURE 17.

BELT TENSION ADJUSTMENT—Drive and Tine Clutches

Periodic adjustment of the belt tension may be required due to normal stretch and wear on the belt. Adjustment is needed if the tines seem to hesitate while tilling, but the engine maintains the same speed.

To adjust, loosen the hex nuts at the cable bracket on the handle. See figure 18. With the clutch lever released as shown in figure 12, adjust the bottom nut so that there is only a slight amount of slack in the control wire. Tighten the upper nut against the bracket.

NOTE

Do not overtighten control wire. Too much tension may cause it to break.

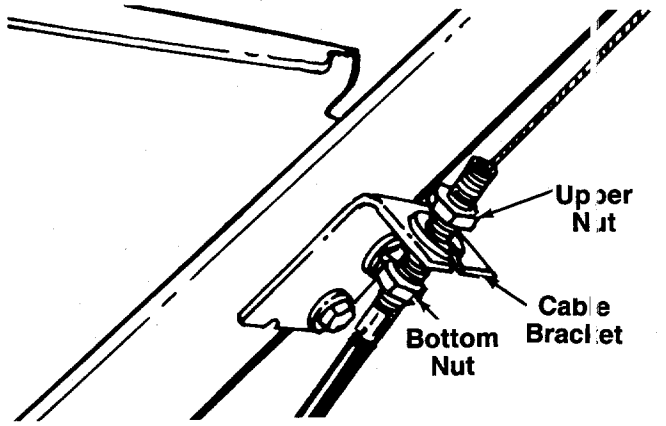


FIGURE 18.

CARBURETOR ADJUSTMENT

WARNING

If any adjustments are made to the engine while the engine is running, (e.g. carburetor), disengage all clutches and tines. Keep clear of all moving parts. Be careful of heated surfaces and muffler.

Minor carburetor adjustment may be required to compensate for differences in fuel, temperature, altitude or load. If adjustments are needed, refer to the engine manual packed with the tiller.

NOTE

A dirty air cleaner will cause engine to run rough. Be certain air cleaner is clean and attached to the carburetor before adjusting carburetor. Do not make unnecessary adjustments. Factory settings are satisfactory for most applications and conditions.

THROTTLE CONTROL ADJUSTMENT

To obtain satisfactory engine performance, the engine throttle control must be adjusted properly. If it is necessary to check the engine control adjustments, proceed as follows.

1. Loosen the cable clamp screw. See figure 19.
2. With the throttle control in FAST position (see figure 12) and the cable connected to the adaptor lever, push the cable through the cable clamp in the direction shown in figure 19 until the adaptor lever is as far up as it will go.
3. Tighten the cable clamp screw.
4. Check that the engine stops when throttle control is moved to STOP position. If engine does not stop, loosen cable clamp screw and readjust by pulling cable backward slightly until engine stops. Retighten cable clamp screw.

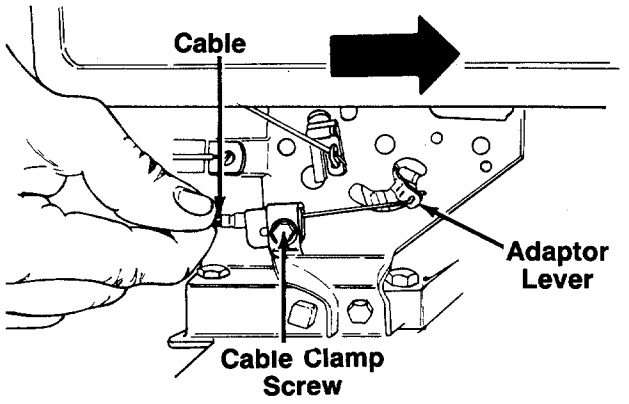


FIGURE 19.

LUBRICATION

Chain Cases—The chain cases are pre-lubricated and sealed at the factory. They require no checking unless the chain cases are disassembled. To fill with grease, lay the left half of the chain case on its side. Add 12 ounces of plastilube #0 grease to the tine chain case or 10 ounces to the wheel chain case. Assemble the right half to it. This grease can be obtained at your nearest authorized dealer. Order part number 737-0133.

Wheels—Lubricate the wheel bearings with a light oil after each fifteen hours of operation.

Tine and Wheel Drive Controls—Lubricate the pivot points on the clutch levers and the cables at least once a season with light oil. The controls must operate freely in both directions.

Pivot Points—Lubricate all pivot points and linkages at least once a season with light oil.

MAINTENANCE

WARNING

Disconnect the spark plug wire and ground it against the engine before performing any repairs or maintenance.

IMPORTANT

If for any reason the tines are removed from the tiller, be certain the tines are reassembled so that the sharp edge of the tines enter the soil first. Refer to item number one under "Operation."

ENGINE

Refer to the separate engine manual for engine maintenance instructions.

Maintain **engine oil** as instructed in the separate engine manual packed with your unit. Read and follow instructions carefully.

Service **air cleaner** every ten hours under normal conditions. Clean every hour under extremely dusty conditions. Poor engine performance and flooding usually indicates that the air cleaner should be serviced. To service the air cleaner, refer to the separate engine manual packed with your unit.

IMPORTANT: Never run your engine without air cleaner completely assembled.

The **spark plug** should be cleaned and the gap reset every 25 hours of engine operation. Spark plug replacement is recommended at the start of each tilling season; check engine manual for correct plug type and gap specification.

Clean the engine regularly with a cloth or brush. Keep the cooling system (blower housing area) clean to permit proper air circulation which is essential to engine performance and life. Be certain to remove all dirt and combustible debris from muffler area.

CLEANING THE TINE AREA

Clean the underside of the tine shield after each use. The dirt washes off the tines easier if washed off immediately instead of after it dries.

TIRES

Recommended operating tire pressure is approximately 12 p.s.i. (check sidewall of tire for tire manufacturer's recommended pressure). Maximum tire pressure under any circumstances is 30 p.s.i. Equal tire pressure should be maintained on both tires.

When installing a tire to the rim, be certain rim is clean and free of rust. Lubricate both the tire and rim generously. Never inflate to over 30 p.s.i. to seat beads.

WARNING

Excessive pressure (over 30 p.s.i.) when seating beads may cause tire/rim assembly to burst with force sufficient to cause serious injury.

BELT REPLACEMENT

CAUTION

Do not use an off-the-shelf belt.

Your tiller has been engineered with belts made of special material (Kevlar Tensile) for longer life and better performance. They should not be replaced with an off-the-shelf belt.

If belt replacement is required, order belt or belts by part number from your nearest authorized dealer.

Drive Belt—Part No. 754-0109
Tine Belt—Part No. 754-0195

Tine (Long) Belt Removal

1. Remove belt cover by removing the four self-tapping screws. See figure 20.

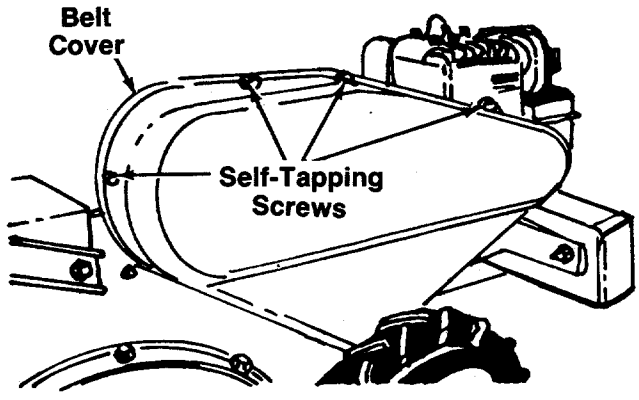


FIGURE 20.

2. Lift the belt from under the flat idler pulley. See figure 21.
3. Remove the wire belt guard. See figure 21.

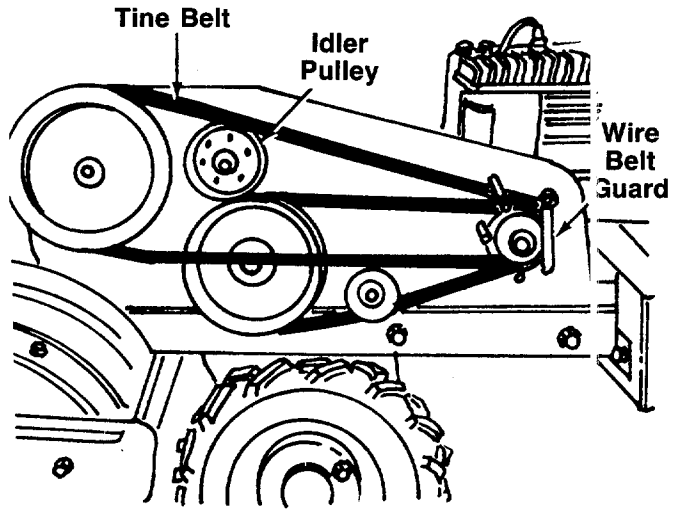


FIGURE 21.

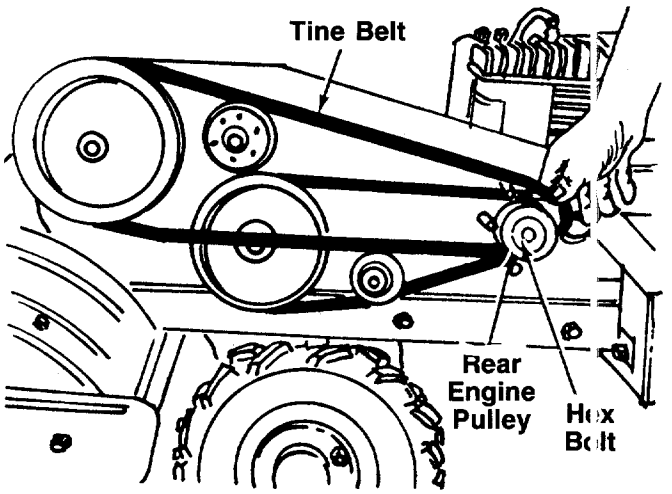


FIGURE 22.

4. Loosen, but do not remove, the hex bolt on the rear engine pulley. See figure 22.
5. Slip the engine pulley out until belt can be removed.
6. Install new belt.

Drive (Short) Belt Removal

1. Remove the tine belt as instructed in the previous section.
2. Remove the hex bolt, lock washer and flat washer from the rear engine pulley. See figure 22. Slip the rear engine pulley off the engine.
3. Loosen the two set screws on the front engine pulley. See figure 23.

NOTE

Do not lose the square key on the engine shaft.

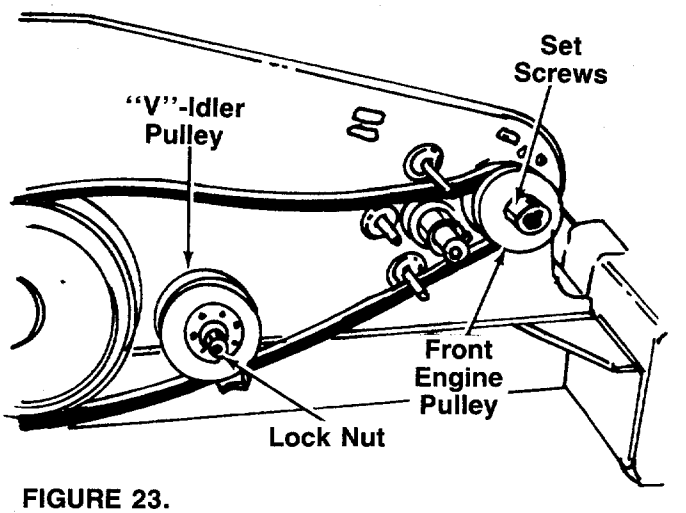


FIGURE 23.

4. Remove the lock nut on the "V"-idler pulley. See figure 23.
5. Slide the front engine pulley and "V"-idler pulley out as shown in figure 24.

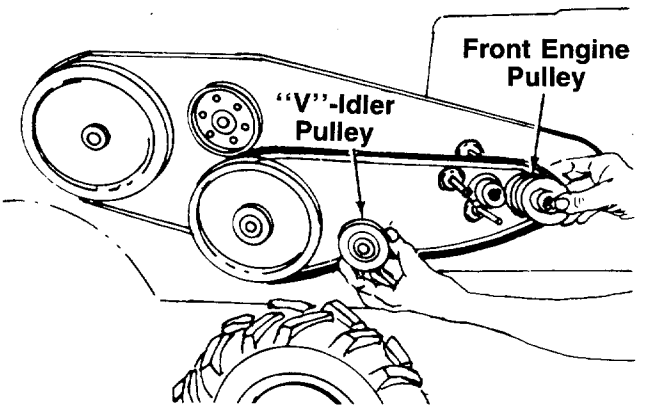


FIGURE 24.

6. Remove the belt and install the new belt. Be sure the belt is routed around the guide pins as shown in figure 25.

NOTE

Belt must be between the "V"-idler pulley and the idler bracket. See figure 25.

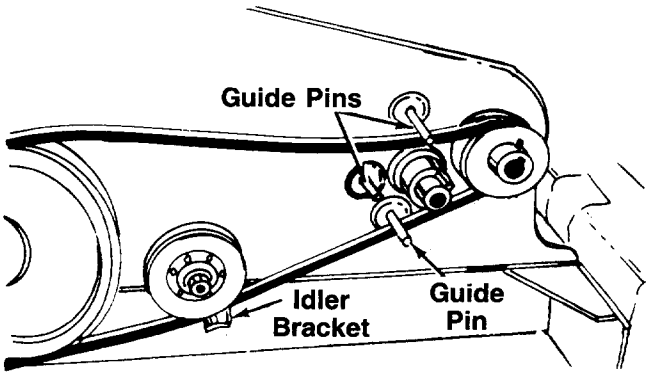


FIGURE 25.

NOTE

Upon reassembly, refer to illustration on page 18 for correct assembly of wire belt guard for your model tiller.

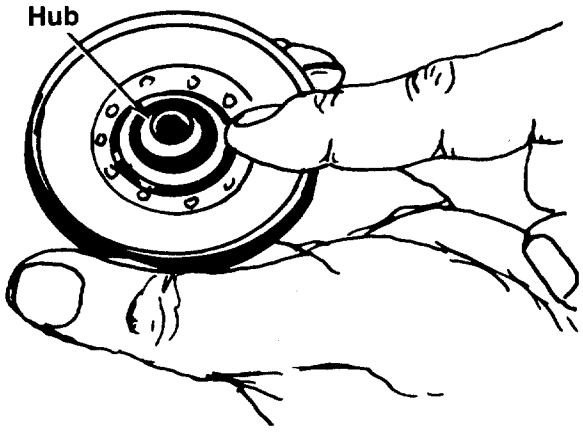


FIGURE 26.

NOTE

If the "V"-idler or flat idler pulleys are removed for any reason, be sure to install with hub side against the idler bracket. See figure 26.

OFF-SEASON STORAGE

If the tiller will not be used for a period longer than 30 days, the following steps should be taken to prepare the tiller for storage.

1. Clean the exterior of engine and the entire tiller thoroughly. Lubricate the tiller as described in the lubrication instructions.
2. Refer to the engine manual for correct engine storage instructions.
3. Wipe tines with oiled rag to prevent rust.
4. Store tiller in a clean, dry area.

NOTE

When storing any type of power equipment in an unventilated or metal storage shed, care should be taken to rustproof the equipment. Using a light oil or silicone, coat the equipment, especially any springs, bearings and cables.

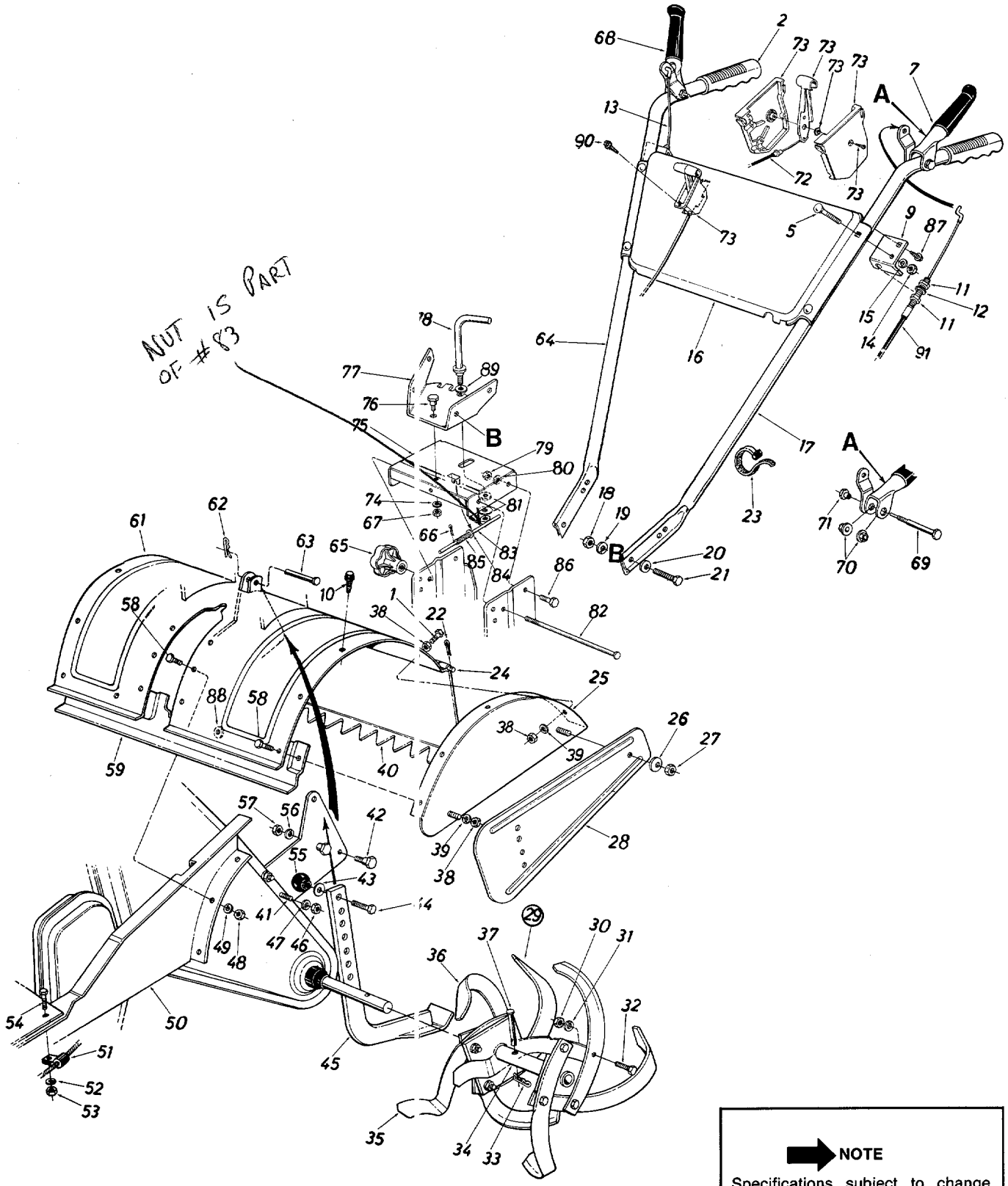
Trouble Shooting Guide

Trouble	Possible Cause(s)	Corrective Action
Engine fails to start	1. Fuel tank empty, or stale fuel. 2. Throttle control lever not in starting position. 3. Blocked fuel line. 4. Spark plug wire disconnected. 5. Faulty spark plug. 6. Engine flooded.	1. Fill tank with clean, fresh gasoline. 2. Move throttle lever to start position. 3. Clean fuel line. 4. Connect wire to spark plug. 5. Clean, adjust gap or replace. 6. Remove spark plug, dry the plug, and crank engine with plug removed and throttle in off position. Replace spark plug, connect wire and resume starting procedures.
Engine runs erratic	1. Unit running on CHOKE. 2. Spark plug wire loose. 3. Blocked fuel line or stale fuel. 4. Vent in gas cap plugged. 5. Water or dirt in fuel system. 6. Dirty air cleaner. 7. Carburetor out of adjustment.	1. Move choke lever to OFF position. 2. Connect and tighten spark plug wire. 3. Clean fuel line; fill tank with clean, fresh gasoline. 4. Clear vent. 5. Drain fuel tank. Refill with fresh fuel. 6. Clean air cleaner as instructed in separate engine manual. 7. Adjust carburetor as instructed in separate engine manual.
Engine overheats	1. Engine oil level low. 2. Air flow restricted. 3. Carburetor not adjusted properly.	1. Fill crankcase with proper oil. 2. Remove blower housing and clean as instructed in separate engine manual. 3. Adjust carburetor as instructed in separate engine manual.
Tines do not engage	1. Foreign object lodged in tines. 2. Tine clevis pin(s) missing. 3. Control cable not adjusted properly. 4. Belt worn and/or stretched.	1. Dislodge foreign object. 2. Replace tine clevis pin(s). 3. Adjust control cable (see assembly instructions). 4. Replace belt.
Wheels do not engage	1. Control cable not adjusted properly. 2. Belt worn and/or stretched.	1. Adjust control cable (see assembly instructions). 2. Replace belt.

NOTE: For repairs beyond the minor adjustments listed above, please contact your local service dealer.

NOTES

Model 405


NUT IS PART OF #83
A
B
NOTE
Specifications subject to change without notice or obligation.

Model 405

PARTS LIST FOR MODEL 405 ROTARY TILLER

REF. NO.	PART NO.	CODE	DESCRIPTION	REF. NO.	PART NO.	CODE	DESCRIPTION
1	710-0528		Hex Bolt 5/16-18 x 1¼" Lg.*	48	712-0267		Hex Nut 5/16-18 Thd.*
2	720-0180		Grip	49	736-0119		L-Wash. 5/16" I.D.*
5	710-0458		Carr. Bolt 5/16-18 x 1.75"*	50	14975	638	Frame Rail—L.H.
7	784-0031		Clutch Grip Ass'y.—L.H. (Tines)	51	726-0175		Clamp 5/16" Dia.
				52	736-0119		L-Wash. 5/16" I.D.*
9	15093C		Clutch Cable Bracket	53	712-0267		Hex Nut 5/16-18 Thd.*
10	710-0607		Hex Wash. S-Tap Scr. 5/16-18 x .62" Lg.	54	710-0118		Hex Bolt 5/16-18 x 3/4" Lg.*
				55	720-0165		Ball Knob 1¼" Dia.
11	712-0256		Hex Nut 5/16-24 Thd.	56	736-0169		L-Wash. 3/8" I.D.*
12	736-0119		L-Wash. 5/16" I.D.*	57	712-0798		Hex Nut 3/8-16 Thd.*
13	746-0484		Wheel Drive Cable	58	710-0118		Hex Bolt 5/16-18 x .75" Lg.*
14	712-0267		Hex Nut 5/16-18 Thd.*	59	15393		Brkt. Reinforcement
15	736-0119		L-Wash. 5/16" I.D.*	61	784-0026		Tine Shield Ass'y.
16	784-0036A	N	Handle Panel	62	714-0149		Hairpin Cotter
17	749-0637		Handle—L.H.	63	711-0415		Clevis Pin 3/8" Dia.
18	712-0798		Hex Nut 3/8-16 Thd.*	64	749-0762		Handle—R.H.
19	736-0169		L-Wash. 3/8" I.D.*	65	720-0195		Hand Knob
20	736-0105		Bell-Wash. 3/8" I.D.	66	714-0127		Cotter Pin 1/16" Dia. x .75" Lg.*
21	710-0253		Hex Bolt 3/8-16 x 1.00" Lg.*	67	712-0375		Hex Cent. L-Nut 3/8-16 Thd.
22	714-0507		Cotter Pin 3/32" Dia. x 3/4"*	68	784-0270		Clutch Grip Ass'y.—R.H. (Wheels)
23	725-0157		Cable Tie				
24	747-0432		Tiller Flap Rod	69	738-0560		Shoulder Bolt .38" Dia. x 1.53" Lg.
25	14989		End Cover Ass'y.—L.H.				
	14990		End Cover Ass'y.—R.H. (Not Shown)	70	741-0402		Hex Flange Plastic Bearing
				71	738-0561		Shoulder Nut ¼-20 Thd.
26	736-0242		Bell-Wash. 5/16" I.D.	72	746-0502		Throttle Control Wire
27	712-0267		Hex Nut 5/16-18 Thd.*	73	831-0823A	N	Throttle Control Box Ass'y.
28	15390	638	Side Shield	74	736-0219		Bell-Wash. .40" I.D.
29	15397		L.H. Tine Ass'y. Comp.	75	784-0022		Handle Pivot Bracket
	15398		R.H. Tine Ass'y. Comp. (Not Shown)	76	738-0281		Shoulder Bolt
				77	784-0019		Handle Mtg. Bracket
30	712-0241		Hex Nut 3/8-24 Thd.*	78	784-0025		Adj. Handle Ass'y.
31	736-0169		L-Wash. 3/8" I.D.*	79	712-0375		Hex Cent. L-Nut 3/8-16 Thd.
32	710-0191		Hex Bolt 3/8-24 x 1.25" Lg.*	80	736-0105		Bell-Wash. .40" I.D. x .88" O.D.
33	714-0149		Hairpin Cotter	81	736-0253		Bell-Wash. ½" I.D. x 1.00" O.D.
34	14978		Tine Adapter Ass'y.	82	711-0765		Lock Pin 5/16" Dia. x 8"
35	742-0106		Tine 12" R.H.	83	784-0023		Lower Sliding Ass'y.
36	742-0105		Tine 12" L.H.	84	736-0463		Fl-Wash. .291" I.D. x .62" O.D.
37	711-0415		Clevis Pin 3/8" Dia.	85	732-0145		Compression Spring .36" O.D. x 1.00" Lg.
38	712-0267		Hex Nut 5/16-18 Thd.*				
39	736-0119		L-Wash. 5/16" I.D.*	86	738-0147		Shoulder Bolt ½" Dia. x .170" Lg.
40	14979		Tine Shield Flap				
41	710-0736		Hex Bolt 5/16-18 x 1.0" Lg.*	87	710-0599		Hex Wash. S-Tap Scr. ¼-20 x .50" Lg.
42	738-0507B	N	Shld. Bolt ½" Dia. x .426"				
43	736-0117		Fl-Wash. 3/8" I.D. x 5/8" O.D.	88	736-0242		Bell-Wash. 5/16" I.D.
44	710-0216		Hex Bolt 3/8-16 x 3/4" Lg.*	89	736-0285		Fl-Wash. 5/8" I.D.
45	14992		Depth Bar Ass'y.	90	710-0779		Self-Tap Scr. #10 x ½" Lg.
46	712-0267		Hex Nut 5/16-18 Thd.*	91	746-0535		Tine Control Cable
47	736-0119		L-Wash. 5/16" I.D.*				

*For faster service obtain standard nuts, bolts and washers locally. If these items cannot be obtained locally, order by part number and size as shown on parts list.

CODE: N notates a **new part** (not previously existing). A three digit number is the **color code** (use if color or finish is important when ordering parts). See chart below. [i.e., (part no.)-638 for Red Finish].

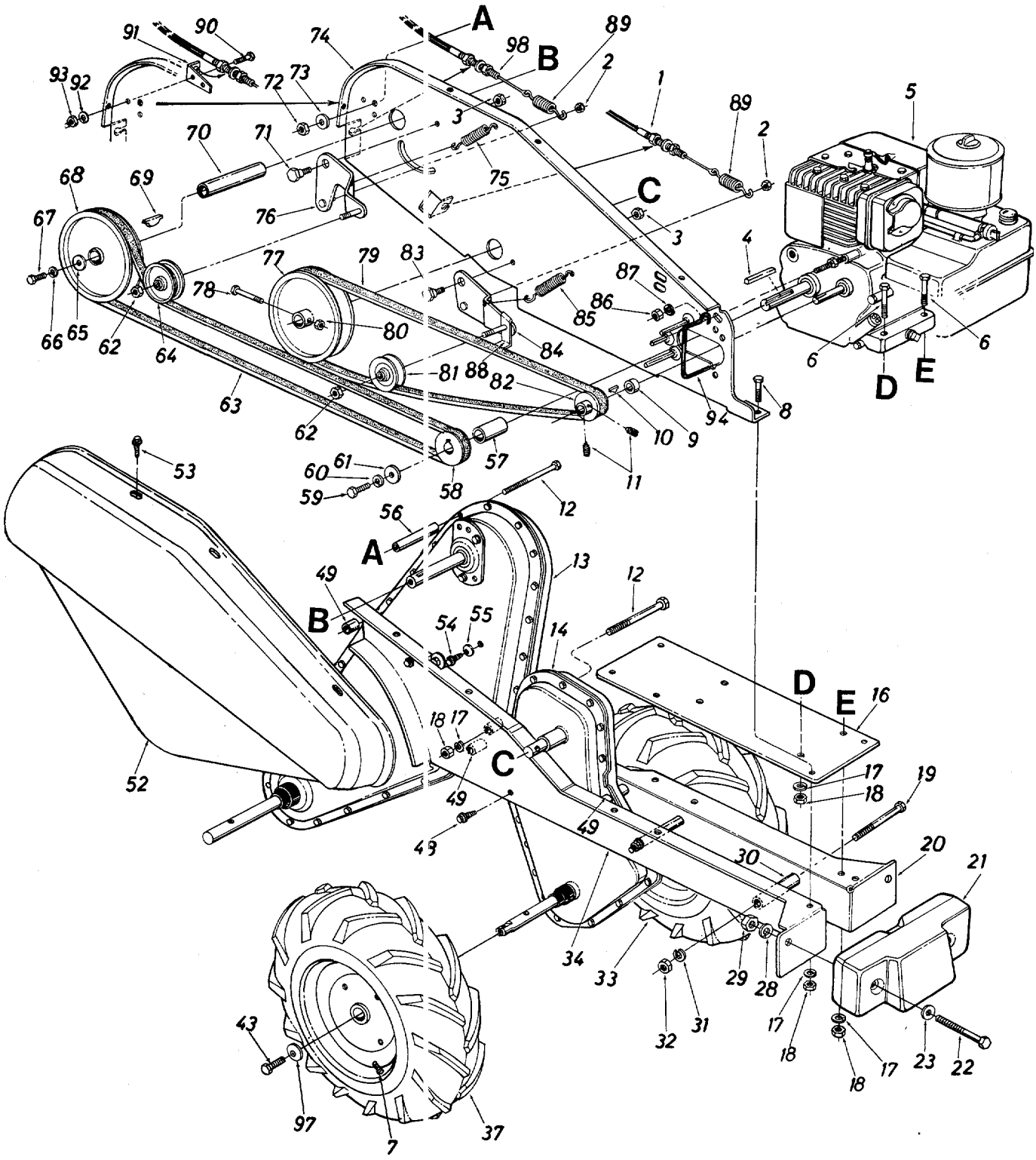
Color Codes

460—Green Flake	630—Blue
483—Charcoal Grey	635—Grey
498—Yellow	636—White
499—Beige	637—Black
606—Orange	638—Red
629—Silver Flake	640—Green

Model 405

NOTE: The engine is not under warranty by the tiller manufacturer...If repairs or service is needed on the engine, please contact your nearest authorized engine service outlet. Check the "Yellow Pages" of your telephone book under "Engines—Gasoline."

Find It Fast In The Yellow Pages



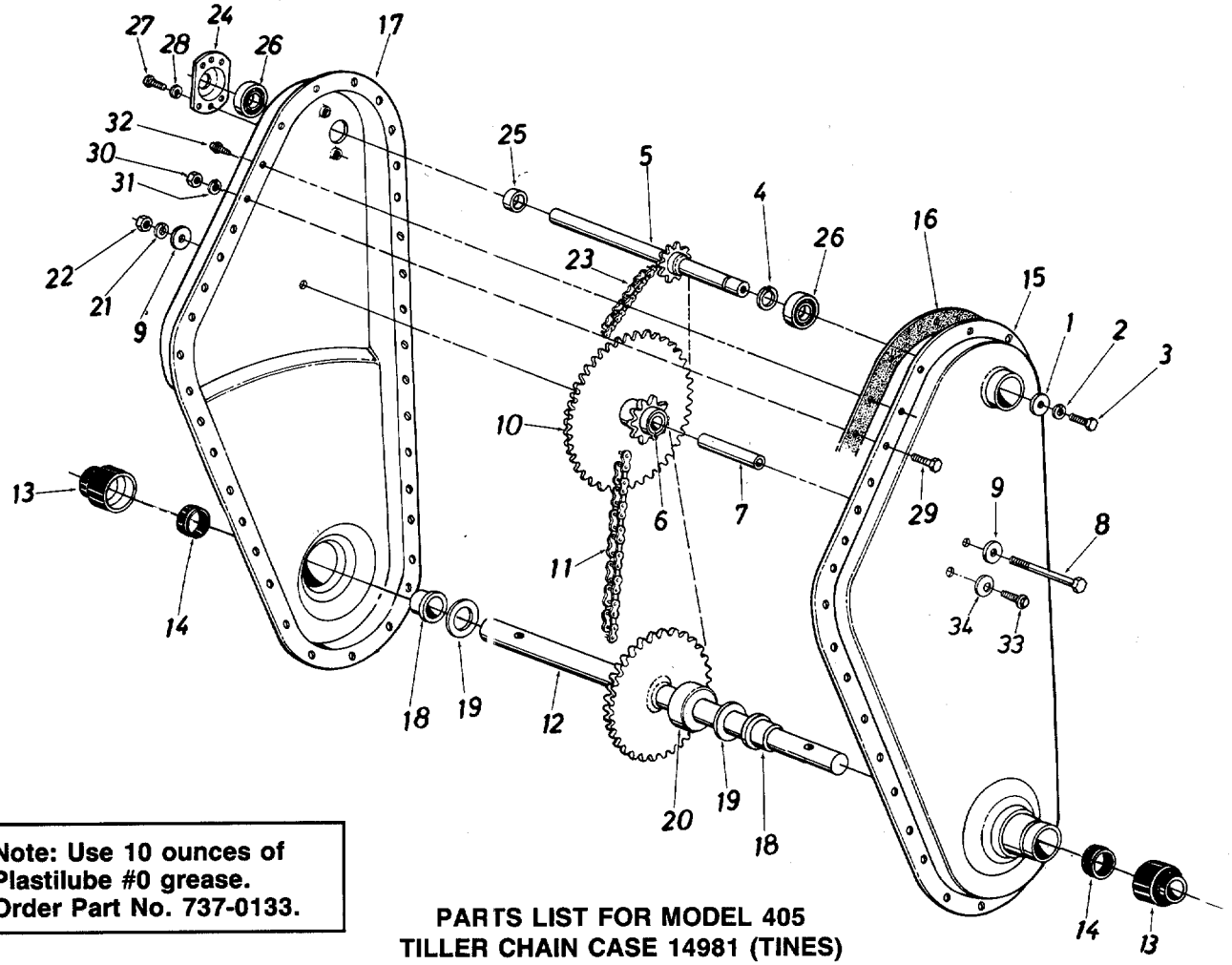
Model 405

PARTS LIST FOR MODEL 405 ROTARY TILLER

REF. NO.	PART NO.	CODE	DESCRIPTION	REF. NO.	PART NO.	CODE	DESCRIPTION
1	746-0484		Clutch Control Cable (Wheels)	55	736-0270		Bell-Wash. ¼" I.D.
2	712-0107		Hex Cent. L-Nut ¼-20 Thd.	56	750-0219		Spacer 3/8" I.D. x ½" O.D. x 2.0" Lg.
3	712-0266		Hex Cent. L-Nut 3/8-16 Thd.*	57	750-0442		Spacer 3/4" I.D. x 1.12" O.D. x 1.56" Lg.
4	714-0122		Sq. Key 3/16" Dia. x .75				
5	—		Engine	58	756-0396		½" "V"-4L Pulley 3/4" I.D. x 2.59" O.D.
6	710-0442		Hex Bolt 5/16-18 x 1.50" Lg.*				
7	734-0255		Air Valve	59	710-0117		Hex Bolt 5/16-24 x 1.0" Lg.
8	710-0118		Hex Bolt 5/16-18 x .75" Lg.*	60	736-0119		L-Wash. 5/16" I.D.*
9	711-0494		Spacer .51" I.D. x 3/4" O.D. x .39" Lg.	61	736-0343		Fl-Wash. 5/16" I.D. x 1.25" O.D.
				62	712-0116		Hex L-Nut 3/8-24 Thd.
10	714-0131		Hi-Pro Key #5 Woodruff	63	754-0195A	N	"V"-Belt
11	710-0938		Set Scr. ¼-28 x .25" Lg.	64	756-0405		Fl-Idler Pulley 3.75" O.D. x 3/8" I.D.
12	710-0189		Hex Bolt 5/16-18 x 3.0" Lg.*				
13	14981		Chain Case Ass'y. Comp.—Tines	65	736-0176		Fl-Wash. .25" I.D. x .93" O.D. x .120
14	~~14963~~ 16976		Chain Case Ass'y. Comp.—Wheels	66	736-0329		L-Wash. ¼" I.D.*
				67	710-0412		Hex Bolt ¼-28 x .75" Lg.*
16	14973	638	Engine Mounting Plate	68	756-0389A	N	Split Pulley 6" Dia. x 5/8" I.D.
17	736-0119		L-Wash. 5/16" I.D.*	69	714-0388		Hi-Pro Key
18	712-0267		Hex Nut 5/16-18 Thd.*	70	750-0472		Spacer
19	710-0830		Hex Bolt 3/8-24 x 3.0" Lg.*	71	738-0183		Shld. Bolt ½" Dia. x .210" Lg.
20	14975		Frame Rail—L.H.	72	712-0267		Hex Nut 5/16-18 Thd.*
21	723-0340		Counter Weight	73	736-0119		L-Wash. 5/16" I.D.*
22	710-0786		Hex Bolt ½-13 x 4.0" Lg.*	74	14991		Side Plate Ass'y.
[illegible]	736-0326		Fl-Wash. ½" I.D. x 1.0" O.D.	75	732-0445		Ext. Spring .50" O.D. x 1.55" Lg.
.3	736-0921		L-Wash. ½" I.D.*				
29	712-0206		Hex Nut ½-13 Thd.*	76	14971	638	Idler Bracket Ass'y.—Tines
30	750-0579		Spacer 3/8" I.D. x 5/8" O.D. x 2.18" Lg.	77	756-0387A	N	Pulley 6" Dia. x 5/8" I.D.
				78	710-0698		Hex Bolt ¼-28 x 1.50" Lg.*
31	736-0169		L-Wash. 3/8" I.D.*	79	754-0109		"V"-Belt
32	712-0241		Hex Nut 3/8-24 Thd.*	80	712-0117		Hex Cent. L-Nut ¼-28 Thd.*
33	734-1377		Comp. Wheel Ass'y.—L.H.	81	756-0166		"V"-Idler Pulley 2-5/8" O.D.
	734-1376		Rim Ass'y.	82	756-0386A	N	½" "V"-Pulley 2¼" O.D. x .50" I.D.
	734-1154		Tire Only				
34	14974		Frame Rail—R.H.	83	738-0147		Shld. Bolt ½" Dia. x .160" Lg.
37	734-1378		Comp. Wheel Ass'y.—R.H.	84	14969		Idler Bracket Ass'y—Wheels
	734-1376		Rim Ass'y.	85	732-0445		Ext. Spring .50" O.D. x 1.55" Lg.
	734-1154		Tire Only 13x5-6	86	712-0287		Hex Nut ¼-20 Thd.*
43	710-0237		Hex Bolt 5/16-24 x .62" Lg.*	87	736-0270		Bell-Wash. ¼" I.D.
48	710-0600		Hex Wash. Self-Tap Scr. 5/16-24 x .50" Lg.	88	15399		Belt Keeper Ass'y.
				89	732-0387		Ext. Spring
49	750-0470		Spacer 5/16" I.D. x 16 Ga. x .96" Lg.	90	710-0118		Hex Bolt 5/16-18 x .75"*
				91	15093C	N	Clutch Cable Brkt.
52	14980A	638/N	Belt Cover	92	736-0119		Lock Washer 5/16" I.D.*
53	710-0599		Hex Wash. S-Tap Scr. ¼-20 x .50" Lg.	93	712-0267		Hex Nut 5/16-18 Thd.*
				94	747-0507		Belt Keeper
54	710-0653		Hex Wash. S-Tap Scr. ¼-20 x 3/8" Lg.	97	736-0242		Bell-Wash. 5/16" I.D.
				98	746-0535		Clutch Control Cable (Tines)

Model 405

TINE CHAIN CASE 14981



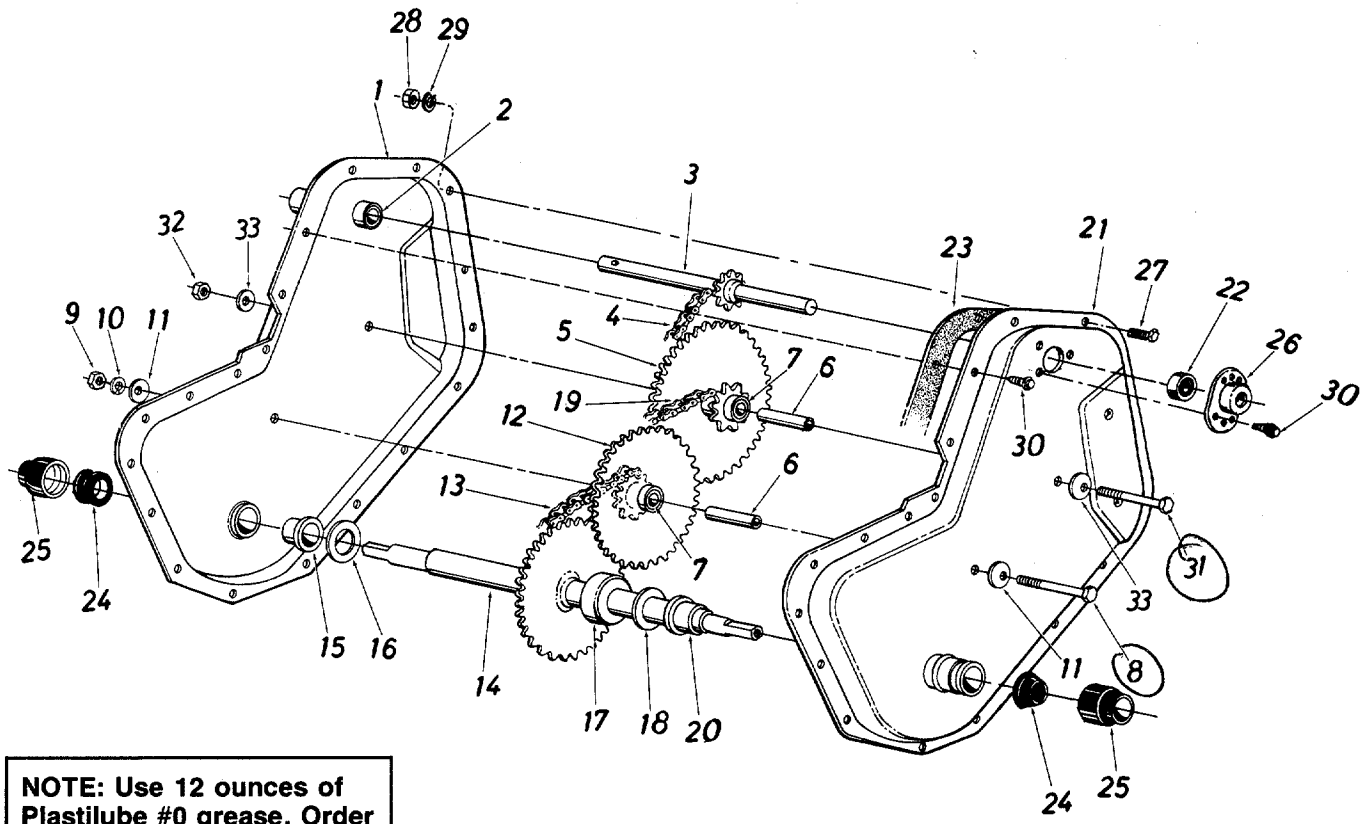
Note: Use 10 ounces of Plastilube #0 grease. Order Part No. 737-0133.

PARTS LIST FOR MODEL 405
TILLER CHAIN CASE 14981 (TINES)

REF. NO.	PART NO.	CODE	DESCRIPTION	REF. NO.	PART NO.	CODE	DESCRIPTION
1	736-0176		Fl-Wash. ¼" I.D. x .9[illegible]" O.D. x .120	19	736-0163		Fl-Thrust Wash. 1.0" I.D. x .03 Thk.
2	736-0329		L-Wash. ¼" I.D.*	20	750-0570		Step Spacer
3	710-0513		Hex Bolt ¼-28 x .62" Lg. w/Patch	21	736-0169		L-Wash. 3/8" I.D.*
4	716-0131		External Snap Ring—[illegible]/8" Dia.	22	712-0711		Hex Nut 3/8-24 Thd.*
5	04956		Input Shaft Ass'y.	23	713-0327		#35 Chain 3/8" Pitch x 52 Links Endless
6	741-0304		Bearing 5/8" I.D. x ¾" O.D. x 1.860" Lg.	24	05034		Bearing Housing 1.38" I.D.
7	750-0275		Sprocket Hub Tubing [illegible]/8" I.D. x 5/8" O.D. x 1 90	25	750-0471		Spacer
8	710-0629		Hex Bolt 3/8-24 x 2.75" Lg.*	26	741-0155		Ball Bearing .625" I.D. x 1.38" O.D. x .437
9	736-0258		Fl-Wash. 3/8" I.D. x 1.25" O.D. x .10	27	710-0599		Hex Wash. SF-Tap Scr. ¼-20 x .50" Lg.
10	713-0331		Sprocket Ass'y.	28	736-0329		L-Wash. ¼" I.D.*
11	713-0328		#50 Chain 5/8" Pitch [illegible] 46 Links Endless	29	710-0118		Hex Bolt 5/16-18 x .75" Lg.*
12	14986		Tine Shaft Ass'y.	30	712-0267		Hex Nut 5/16-18 Thd.*
13	731-0487		Dust Cup	31	736-0119		L-Wash. 5/16" I.D.*
14	721-0175		Seal Ring Single Lip, [illegible]pringless	32	710-0599		Hex Wash. SF-Tap Scr. ¼-20 x .50" Lg.
15	14984		Ass'y. Tiller Housing—R.H.	33	710-0653		Hex Wash. Hd. Tap Scr. ¼-20 x .38" Lg.
16	721-0170		Gasket	34	736-0270		Bell-Wash. .265" I.D. x .75" O.D.
17	14985		Ass'y. Tiller Housing—L.H.	—	737-0133		Grease—Plastilube #0 (12 oz.)
18	731-0374		Flange Brg. 1.00" I.D.				

Model 405

WHEEL CHAIN CASE
16976



NOTE: Use 12 ounces of Plastilube #0 grease. Order Part No. 737-0133.

PARTS LIST FOR MODEL 405
TILLER CHAIN CASE (WHEELS)

REF. NO.	PART NO.	CODE	DESCRIPTION	REF. NO.	PART NO.	CODE	DESCRIPTION
1	14962		Chain Case Half Ass'y.—R.H.	18	736-0265		Fl-Wash. .88″ I.D. x 1.50″ O.D. x .03
2	748-0154		Bearing 5/8″ I.D. x .813″ O.D. x 1.31″ Lg.	19	713-0267		#420 Chain ½″ Pitch x 30 Links Endless
3	14960		Input Shaft Ass'y.				
4	713-0325		Chain #35—3/8″ Pitch x 44 Links	20	741-0227		Flange Bearing
5	713-0316		Sprocket and Hub Ass'y.	21	15797		Chain Case Half Ass'y.—L.H.
6	750-0351		Bearing Inner Axle 3/8 I.D.	22	741-0155		Bearing
7	741-0228		Sleeve Brg. 5/8″ I.D. x ¾″ O.D. x 1.50	23	721-0156		Gasket
				24	721-0157		Seal
8	710-0369		Hex Bolt 3/8-24 x 2.50″ Lg.*	25	731-0486		Dust Cup
9	712-0116		Hex Ins. L-Nut 3/8-24 Thd.	26	05034		Bearing Housing
10	736-0169		L-Wash. 3/8″ I.D.*	27	710-0195		Hex Bolt ¼-28 x 5/8″ Lg.
11	736-0219		Bell-Wash. .41″ I.D. x 1.13″ O.D. x .03	28	712-0138		Hex Nut ¼-28 Thd.
				29	736-0329		L-Wash. ¼″ I.D.*
12	713-0330		Sprocket & Hub Ass'y. 9T-22T	30	710-0599		Hex Wash. S-Tap Scr. ¼-20 x .50″ Lg.
13	713-0326		#420 Chain ½ Pitch x 28 Links Endless	31	710-0378		Hex Bolt 5/16-18 x 2.5″ Lg.
14	784-0126A	N	Wheel Shaft Ass'y.	32	712-0158		Hex Cent. L-Nut 5/16-18 Thd.
15	741-0227		Flange Bearing	33	736-0159		Fl-Wash. 5/16″ I.D.
16	736-0265		Fl-Wash. .88″ I.D. x 1.5″ O.D. x .03	—	737-0133		Grease—Plastilube #0 (10 oz.)
				—	16976		Chain Case Ass'y. Comp.
17	750-0354A	N	Spacer 7/8″ I.D. x 1¾″ O.D. x .68″ Lg.				

*For faster service obtain standard nuts, bolts and washers locally. If these items cannot be obtained locally, order by part number and size as shown on parts list.

Heavy Duty Rear Tine Garden Tiller Attachments Available for All-Season Use

31-0110 8″ Furrower Opener
31-0144 "V"-Bar Cultivating Kit (Must be used with 31-0178 adapter) Kit Includes: "V"-Bar Frame, 4-Point Cultivating Tines, Hiller/Furrower, Depth Gauge Wheels (Pair).
31-0145 Depth Stake Cultivating Kit (Must be used with 31-0178 adapter) Kit Includes: 8″ Furrower Opener, 15″ Sweep Cultivator, 32″ Leveling Rake, Extra Depth Stake.
31-0178 Adapter

To use these attachments on the tiller, it is necessary to:

1. Remove the tine shield flap assembly.
2. Remove the depth bar assembly (except when using the 8″ furrower opener).

Note: Attachments are available through your local dealer or from the factory: Agri-Fab Inc., 303 W. Raymond Street, Sullivan, Illinois 61951 (217) 728-4334.

PARTS INFORMATION

POWER EQUIPMENT PARTS AND SERVICE

Parts and service are available through the authorized service firms listed below. All orders should specify the model number of your unit, part numbers, description of parts and the quantity of each part required.

BRIGGS AND STRATTON, TECUMSEH AND PEERLESS PARTS & SERVICE

Briggs & Stratton, Tecumseh and Peerless parts and service should be handled by your nearest authorized engine service firm. Check the yellow pages of your telephone directory under the listing **Engines—Gasoline,** Briggs & Stratton or Tecumseh Lauson.

NOTE: If any parts are found to be missing or defective upon assembly of this unit, write to advise the factory so that immediate replacement can be made.

ALABAMA	**BIRMINGHAM**	
Auto Electric & Carburetor Co.	2625 4th Ave. S. Box 2466	35233
ARKANSAS	**NORTH LITTLE ROCK**	
Sutton's Lawn Mower Shop	5301 Roundtop Drive Box 368, Rt. 4	72117
CALIFORNIA	**PORTERVILLE**	
Billious	75 North D Street	93257
COLORADO	**DENVER**	
Spitzer Industrial Products Co.	6601 N. Washington St.	80229
FLORIDA	**JACKSONVILLE**	
Radco Distributors	4909 Victor St. Box 5459	32207
	HIALEAH	
Small Eng. Dist.	7995 W. 26th Court	33016
GEORGIA	**EAST POINT**	
East Point Cycle & Key Inc.	2834 Church St.	30344
ILLINOIS	**LYONS**	
Keen Edge Co.	8615 Ogden Ave.	60534
INDIANA	**ELKHART**	
Parts & Sales Inc.	2101 Industrial Pkwy. Box 277	46516
IOWA	**DUBUQUE**	
Power Lawn & Garden Equip.	2551 J.F. Kennedy	52001
LOUISIANA	**LAFAYETTE**	
Jourdan Engine Co.	214 W. Vermillion St. Box 3503	70501
MARYLAND	**TAKOMA PARK**	
Center Supply Co.	6867 New Hampshire Ave.	20912
MASSACHUSETTS	**SPRINGFIELD**	
Morton B. Collins Co.	300 Birnie Ave.	01107
MICHIGAN	**MOUNT CLEMENS**	
Power Equipment Dist.	340 Hubbard	48043
MINNESOTA	**PLYMOUTH**	
Hance Distributing Inc.	12795 16th Ave. North	55441
MISSOURI	**EARTH CITY**	
Oscar Wilson Engine & Parts	4159 Shoreline Dr.	63045
	KANSAS CITY	
Automotive Equip. Service	3117 Holmes St.	64109
NEW JERSEY	**ALLOWAY**	
Piersons	Canal St., Box 494	08001
NEW YORK	**CARTHAGE**	
Gamble Dist., Inc.	West End Ave. Box 389	13619
NORTH CAROLINA	**GREENSBORO**	
Dixie Sales Company	335 N. Green Box 1408	27402
OHIO	**CARROLL**	
Stebe's Mid-State Mower Supply	Box 366, 71 High St.	43112
	CLEVELAND	
Bleckrie, Inc.	7900 Lorain Ave.	44102
	WADSWORTH	
National Central	687 Seville Rd.	44281
	YOUNGSTOWN	
Burton Supply Co.	1301 Logan Ave. Box 929	44501
PENNSYLVANIA	**HARRISBURG**	
EECO Inc.	4021 N. 6th St.	17110
	WILLOW GROVE	
Thompson Rubber Co.	850 Davisville Rd.	19090
	PITTSBURGH	
Bluemont Co.	11101 Frankstown Rd.	15235
	PUNXSUTAWNEY	
Frank Roberts & Sons	R.D. 2	15767
	SCRANTON	
Scranton Auto Ignition Co.	1133-35 Wyoming Ave.	18
TENNESSEE	**KNOXVILLE**	
Ace Distributors	2103 Magnolia	37917
	MEMPHIS	
American Sales & Service, Inc.	3035-43 Bellbrook	38116
TEXAS	**DALLAS**	
Marr Brothers, Inc.	423 E. Jefferson	75203
	SAN ANTONIO	
Engine House Inc.	4918 Golden Quail	78249
UTAH	**SALT LAKE CITY**	
Powered Products	1661 N. Beck St.	84116
VIRGINIA	**ASHLAND**	
RBI Corp.	101 Cedar Ridge Dr.	23005
WASHINGTON	**SEATTLE**	
Equip. Northwest	1410 14th Ave.	98122
WISCONSIN	**MILWAUKEE**	
Wisconsin Magneto Inc.	4727 N. Teutonia St.	53209
PUERTO RICO	**AGUADILLA**	
CIE & Associates, Inc.	Box 427 Ramey Station	00604

WARRANTY PARTS AND SERVICE POLICY (0588)

The purpose of warranty is to protect the customer from defects in workmanship and materials, defects which are NOT detected at the time of manufacture. It does not provide for the unlimited and unrestricted replacement of parts. Use and maintenance are the responsibility of the customer. The manufacturer cannot assume responsibility for conditions over which it has no control. Simply put, if it's the manufacturer's fault, it's the manufacturer's responsibility; if it's the customer's fault, it's the customer's responsibility.

CLAIMS AGAINST THE MANUFACTURER'S WARRANTY INCLUDES:

1. **Replacement of Missing Parts** on new equipment.
2. **Replacement of Defective Parts** within the warranty period.
3. **Repair of Defects** within the warranty period.

All claims MUST be substantiated with the following information:

1. **Model Number, Serial Number and/or Data Code** of unit involved.
2. **Date** unit was purchased or first put into service.
3. **Date of Failure.**
4. **Nature of Failure.**